FINAL REPORT

19960513

SPOKE APPLIED RESEARCH AND DEMONSTRATION

March 2002
Funded by the Agri-Food Innovation Fund

Prepared by: Ag and Agri-Food Canada

AGRI-FOOD INNOVATION FUND

Canada

Saskatchewan

102-05954/

Specialized Crop Production
"Spoke Program"
Agri-Food Innovation Fund
Final Report
1997 - 2002

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Tab 1. Summary

The main objectives of the Spoke Program of the Specialized Crop Production Area of the Canada-Saskatchewan Agri-Food Innovation Fund (AFIF) were to establish joint industry-government applied research and demonstration programs and to find solutions to agronomic and crop protection problems and demonstrate specialized crop production technology to local producers. The specialized crops included in the Spoke Program were pulse, alfalfa, honey bees, organic crops, forage seeds, herbs and spices, sunflowers and some minor use registration of crop protection products on a number of the special crops studied. The studies were conducted at seven locations, Indian Head, Canora, Redvers, Swift Current, Outlook (irrigation site), Melfort and Scott. In excess of 60 studies were conducted over the last five years. A technical report summarizing the results of each study was produced for each of the five years of the program. Copies of these results can be obtained from the new provincial coordinator, Mr Jody McConnell, associated with the SAF Extension Research Unit at the University of Saskatchewan in the College of Agriculture Building. A series of research summaries have been produced highlighting all the important findings from the last five years of research. These summaries will be made available on the current website http://parisdss.usask.ca/specialcrop and copies will be available at each Rural Service Center in Saskatchewan. 2001 represented the last year of the Spoke program as we have come to know it but starting on April 1, 2002, the activities will be assumed by Agri-ARM (Applied Research and Management), the new replacement program. Agri-ARM will be managed through the Extension Research Unit of Saskatchewan Agriculture and Food.

Tab 2. Technical Reports / Research Summaries

In order to ensure that the relevant information generated from the Spoke Program was going to reach the end user, it was decided that a series of research summaries, 2-3 pages in length, would be produced. The summaries would be brief, concise and written in such a way as to avoid a lot of technical jargon. There will be approximately 85 summaries published. A total of one hundred books of those summaries will be produced and distributed to all SAF Extension Offices. As well, a copy of the booklet will be provided on the CD with each book in PDF format. People will be free to make copies of the CD and to print out which ever research summary is of interest. All research summaries will include the proper recognition. As well a copy of each summary will be posted on the Spoke (Agri-ARM) Website. A copy of all the summaries is included at the end of this section.

Tab 4. Innovation Fund Acknowledgments

The Spoke program under the Special Crops Area of the Canada-Saskatchewan Agri-Food Innovation had two main objectives; the first one was to find solutions to agronomic and pest problems with the new special crops and the second one was to develop enough momentum during the five years of the program in order to sustain the Spoke program beyond the five years of the AFIF program.

The strategy to achieve these objectives was to provide producers and stakeholders with a continual flow of technical information emanating from this program. Following is a description of the methods used to accomplish this.

1. Display for Regional and Provincial Trade Shows

A full length 8' x 8' trade show display was put together to highlight the Spoke Program in the first year. This display was used at the following trade shows.

Provincial Trade Shows: The Crop Production Show held in January of each year in Saskatoon as part of Crop Production Week for the years 1998, 1999, 2000, 2001 and 2002, There is approximately 14,000 to 16,000 spectators attending the show each year. This means that potentially 70,000 to 90,000 people were exposed the Spoke Program during the five year period.

Provincial Trade Shows: The Saskatchewan Soil Conservation Association has an annual meeting each year in February which attracts on average 1000 people. The Spoke program was highlighted in the trade show in 1998, 1999, 2000, 2001 and 2002. Over the five year program roughly 5000 people were made aware of th Spoke Program.

Provincial Trade Show: A booth was put on display highlighting the Spoke Program at the 20001 Farm Progress Show in the Regina. The display was up for four days. This show has on average 40,000 paid attendees.

Regional Trade Shows: The Spoke Program was highlighted at one trade show in Canora in the spring of 1998 and at a trade show at Revers in the spring of 1998 and 1999. This represents approximately a coverage of about 800 people.

2. Field Days: A minimum of one field day was held at each site each year for a total of a least 35 field days (7 sites * 5 years =35) over the course of the five years of the project. Attendance would have averaged 150 people per field day per year for a total of 5250 producers. Each field day would have specifically highlighted the AFIF Spoke Program.

3. Winter Meetings: A minimum of one winter meeting was held at each location to highlight the findings from the Spoke Program. This represents 35 winter meetings (7 sites * 5 years =35) over the course of the five years of the project. Assuming an average attendance of 100 people,

this represents 3500 people that learned about the AFIF program.

4. Provincial Newsletters: A provincial newsletter was published every year in June in order to feature the main activities of the Spoke Program and to advertise the field days at all the locations. A mailout of approximately 1200 was done each year for a total of 6000 over the five-year period. The mailing list consisted of the AFIF Board, all board members associated with commodity groups involved with the Spoke Program, all MLAs and MPs from Saskatchewan, all of the related agricultural industry, AAFC, SAF and University of Saskatchewan officials. The mailing list was kept current.

5. Conference Proceedings: During the five years of the program, presentations were done at various conferences to highlight the AFIF Spoke program and findings from the program. In most cases, a summary was also included in the conference proceedings. Following are references to those conference proceedings. Copies of each article are provided at then end of the section.

Buckwaldt, L., G. Chongo, B.D. Gossen, T. Hogg, E. Johnston, and G. Lafond. 2000. Evaluation of fungicides for control of aschochyta blight of chickpea. Pages 53-54 in Proceedings of the Third Pulse Crop Research Workshop, Winnipeg, MB.

Chongo, G., S. Banniza, T. Wolf and G. Lafond, 2002. Improvement of Aschochyta blight control in chickpea through spray application delivry method. Page 85 in Proceedings of Pulse Days 2002. Saskatchewan Pulse Growers. Saskatoon, SK.

Holm. F., K. Sapsford, E. Johnson, R. McVicar and K. Kirkland. 2002. In search of selective herbicides for chickpea. Pages 87 in Proceedings of Pulse Days 2002. Saskatchewan Pulse Growers. Saskatoon, SK.

Irvine, B. and G. Lafond. 2000. Are liquid rhizobia formulations effective soil implants for pea? Pages 64-66 in Proceedings of the Third Pulse Crop Research Workshop, Winnipeg, MB.

Johnston, A, G. Clayton, G. Lafond, N. Harker, T. Hogg, E. Johnson, and J. McConnell. 2000. Field pea seeding management with optimum weed control. Page 73 in Proceedings of Pulse Days 2002. Saskatchewan Pulse Growers. Saskatoon, SK.

Johnston, A., G. Lafond, S. Brandt, B. Nybo, D. Larsen, W. Schatz, and T. Hogg. 1998. Fertilizer Response and placement with field pea. Pages 47-49 in Progress Reports on Pulse Crop Research in Western Canada Vol 3. Saskatoon , SK.

Johnston, A., W. Schatz, G. Lafond, T. Hogg, D. Larsen, E. Johnson and B. Nybo. 1998. Pulse Crop Adaptation in Saskatchewan. Pages 5-7 in Progress Reports on Pulse Crop Research in Western Canada Vol 3. Saskatoon , SK.

Kutcher, R., A. Johnston, W. Schatz, G. Lafond, T. Hogg, D. Larsen, E. Johnston and B. Nybo. 1998. Pulse crop seed fungicide x legume inoculant evaluation. Pages 82-83 in Progress Reports on Pulse Crop Research in Western Canada Vol 3. Saskatoon , SK.

Lafond G. and A. Johnston. 1998. Effects of re-cropping spring wheat on land sown to field pea using different inoculant formulations and rates of nitrogen fertilizers. Pages 50-52 in Progress Reports on Pulse Crop Research in Western Canada Vol 3. Saskatoon , SK.

Lafond G. and A. Johnston. 1998. Effect of granular inoculant rate and placement on the yield of field pea. Pages 53-55 in Progress Reports on Pulse Crop Research in Western Canada Vol 3. Saskatoon , SK.

Lafond, G. and A. Johnston. 1998. Effect of inoculant formulation and nitrogen fertilizer on the yield of field pea. Pages 56-58 in Progress Reports on Pulse Crop Research in Western Canada Vol 3. Saskatoon , SK.

Lafond, G. and A. Johnston. 1998. Effects of re-cropping field pea on land previously seeded to field pea and the need for inoculation. Pages 59-61 in Progress Reports on Pulse Crop Research in Western Canada Vol 3. Saskatoon , SK.

Lafond, G., A. Johnston and G. Clayton. 2000. Field pea inoculation - Where do we go from here...Pages 18-20 in Proceedings of the Third Pulse Crop Research Workshop, Winnipeg, MB.

Lafond, G., B. Sim and E. Johnson. 2001. Spoke Sites: Research for you in your own backyard. Page 14-17 in the Proceedings of the 13th Annual Meetings of the Saskatchewan Soil Conservation Association, Saskatoon, SK.

Lafond, G., S. Brandt, L. Buckwaldt, Y. Gan, A. Johnston, R. McVicar, F. Walley, T. Warkentin, and A. Vandenberg. 2000. Chickpea in rotation. Pages 56-70 in Proceedings of the 12th Annual Meetings of the Saskatchewan Soil Conservation Association, Regina, SK.

Lafond, G. 1998. Agri-Food Innovation Fund - Specialized Crop Production - Spoke Program: A new approach. Pages 1-5 in Proceedings of Pulse Days 1998. Saskatchewan Pulse Growers. Saskatoon, SK.

Lafond, G., S. Brandt, G. Clayton, A. Johnston, R. Kutcher, N. Harker, B. McConkey and W. Rice. 1999. Pages 14-19 in Proceedings of Pulse Days 1999. Saskatchewan Pulse Growers. Saskatoon, SK.

Walley, F., A. Johnston, G. Lafond, and Y. Gan. 2001. Optimizing fertility in lentils and peas. Pages 87-97 in Proceedings of Pulse Days 2001. Saskatchewan Pulse Growers. Saskatoon, SK.

6. Articles in Commodity Newsletters: During the course of the five-year program, a number of

articles were written in various commodity newsletters highlighting the program. Following are some references with copies of the articles provided at the end of the section.

Lafond, G. Weeds and Field Pea: Should we be spraying earlier? Saskatchewan Pulse Growers Newsletter.

Lafond, G. Saskatchewan Spoke Site Update. Saskatchewan Pulse Growers Newsletter.

Lafond, G. and A. Johnston. Field Pea Inoculation and Starter Nitrogen. Saskatchewan Pulse Growers Newsletter.

Walley, F. When to use starter N on Pulses. Saskatchewan Pulse Growers Newsletter.

Additional articles highlighting the Spoke program were submitted and published in the newsletters of the Saskatchewan Herb and Spice Association and OPIS which is the newsletter for the Saskatchewan Organic Producers. As well the Spoke Program was featured in at least two article of the Innovation Report which was distributed widely across the province as a way to inform the general public about the overall AFIF Program while at the same time highlighting different areas. Copies or references are not provided.

7. Website: A comprehensive website was developed and running by February 1998. For the period October 19, 1998 to March 13th, 2002, there has been a total of 19, 270 visits to the site. The address is http://paridss.usask.ca/specialcrop.

8. Brochures: Two printings of a brochure was done. The brochure provided details about the spoke program and a list of contacts and associated commodity groups. Copies of the brochure are provided at the end of the section.

9. Resource Material:

A literature review entitled "Weed Management for Organic Producers" was written by Dr. Brenda Frick Copies of the review were made and distributed upon request. The document was publicized on the website and electronic copies made available upon request. A copy of the literature review is provided at the end of the document.

A part of the website, a series of 46 research summaries were prepared and included under the section Research/Resources. Please refer to the website for viewing **http://paridss.usask.ca/specialcrop** . They cover results obtained from the field studies under the Spoke program.

Another important resource developed was the Decision Support System for Pulse Crops developed by Dr Lone Buckwaldt and Dr Bruce Gossen. The decision support system can be viewed at **http://paridss.usask.ca/specialcrop/pulse_diseases**

In order to familiarize producers and the general public to the various herbs that can be grown in Saskatchewan, a series of 31 different summaries were prepared and posted on the website at the following address: **http://paridss.usask.ca/specialcrop/commodity/herb_spice/tour.html** The summaries also include links to other websites in order to obtain more information.

As well, a series of herb and spice photos is being finalized by the Saskatchewan Herb and Spice Association. The number of photos will exceed 1300. The photos covers numerous species and includes photos at different stages of the plant all the way from the seed to the flower. This will provide a very good learning material.

10. Factsheets: The Canada-Saskatchewan Irrigation Diversification Centre has published a number of glossy factsheets summarizing some of their findings under the AFIF -Spoke Program. Following is a list of references and copies of the factsheets are provided at the end of this section.

Optimum seeding rates for irrigated pea production. Canada-Saskatchewan Irrigation Diversification Centre: Research Highlights: March 2001.

Irrigated Field Pea: Selecting a Variety. Canada-Saskatchewan Irrigation Diversification Centre: Research Highlights: March 2001.

Optimum Seeding Rate and Row Spacing for Dry Bean Under Irrigation. Canada-Saskatchewan Irrigation Diversification Centre: Research Highlights: March 2001.

Fertility Management for Dry Bean Production under Irrigation. Canada-Saskatchewan Irrigation Diversification Centre: Research Highlights: March 2001.

11. Regional Newsletters: In order to ensure that the information generated from the program was received by the producers, a series of seven regional newsletters associated with the seven Spoke Sites were published. In each issue, half the content was provincial in scope and the other half represented information that was more regional in scope. A copy of each newsletter is provided at the end of this section. A total of 156,400 newsletters were distributed during the last four years of the program. Refer to the table below for a breakdown of the numbers distributed by year and location

Site	1998-99	1999-00	2000-01	2001-02
Canora	10,000	8,000	8,000	8,000
Redvers	-	6,500	6,500	6,500
Swift Current	-	10,000	10,000	10,000
Indian Heads	-	7,000	7,000	6,000

Melfort	-	-	10,000	10,000
Scott	-	-	10,400	10,500
Outlook	-	-	6,000	6,000
Total	**10,000**	**31,500**	**57,900**	**57,000**

12. Annual Technical Reports: A series of technical reports were prepared on an annual basis. These reports provided a complete description of all the results obtained for each study conducted under the Spoke Program. The reports were reviewed by the cooperating commodity groups and approved by the steering committee on a yearly basis. The reports were circulated to each Rural Service Centre and to all staff in the Sustainable Branch of Saskatchewan Agriculture and Food.

13. Media Articles: Although copies of all articles published in the popular press are not available, a few of the articles are included for examples at the end of this section.

Briere, K. 1997. Seven Sites, many crops but one purpose. Western Producer. Page 60. July 10th issue.

McMillan, D. 1997. Gummy centre focus of fenugreek research. Western Producer. Page 54. September 18th issue.

Stephenson, B. Opportunity knocks loudly for specialized crop. Innovation Report. Canada-Saskatchewan Agri-Food Innovation Fund.

Tab 5. Project Public Information Materials

Website: A comprehensive website was developed and running by February 1998. For he period October 19, 1998 to March 13th, 2002, there has been a total of 19, 270 visits to the site. The site offered some important resources dealing

Brochures: Two printings of a brochure was done. The brochure provided details about the spoke program and a list of contacts and associated commodity groups. Copies of the brochure are provided at the end of the section. Many of these were picked by the general public at trade shows because a lot of material was useful for school projects.

Herb and Spice Tour on the Internet: In order to familiarize the general public to the various herbs that can be grown in Saskatchewan, a series of 31 different summaries were prepared and posted on the website at the following address:
http://paridss.usask.ca/specialcrop/commodity/herb_spice/tour.html
The summaries also include links to other websites in order to obtain more information. This provided a valuable resource for people with an interest in herbs, regardless of whether they were producers.

Tab 7. Evaluation Criteria

The AFIF contract specifies that a statement of measurable accomplishments relative to the deliverables be provided as outlined in Appendix C of the contract. Below is a list of the five deliverables identified in the contract.

1. Program logistics at a provincial Level (coordination of land, equipment, research and demonstrations)

2. Provincial coordination of extension events and materials (manuals, signs etc.)

3. Development of reports and publications including annual report to AFIF in cooperation with Technical Experts and Agriculture and Agri-Food Canada

4. Partnerships with governments, universities and industry (in cooperation with the steering committee).

5. Management of coordination and extension budget.